

Appl. No.: 10/686,389  
Amdt. Dated: June 7, 2007  
Reply of Office action of March 13, 2007

Docket No. KIM-10113

### **AMENDMENTS TO THE CLAIMS**

Please amend Claims 1, 2, 3, 4 and 6 as follows:

1. (Currently amended) A method for preprocessing audio data to be processed by a predetermined codec having variable coding rate, comprising the steps of:

classifying the audio data based on ~~the~~a characteristic of the audio data; and

preprocessing frames of audio data selected based on the classification before the audio data is subject to the codec.

2. (Currently amended) A method for preprocessing audio data to be processed by a predetermined codec having variable coding rate, comprising the steps of:

classifying the audio data based on ~~the~~a characteristic of the audio data;

in case the audio data includes monophonic sound, performing AGC (automatic gain control) preprocessing of all frames before the audio data is subject to the codec; and

in case the audio data includes polyphonic sound, performing AGC preprocessing of selected frames before the audio data is subject to the codec.

3. (Original) A method in accordance with claim 2, wherein the step of performing AGC preprocessing of selected frames include deciding whether a frame in the audio data includes noise signal or not.

4. (Currently amended) A method for preprocessing audio data to be processed by a codec having variable coding rate, comprising the steps of:

deciding an interval of audio data that is to be encoded in a low bit rate in said codec; and

adjusting the amplitude of audio data of the decided interval before the audio data is processed by the codec, such that the audio data in the interval may ~~not~~ be encoded in a bit rate higher than or equal to said low bit rate when processed by the codec.

5. (Original) A method in accordance with claim 4, wherein the adjusting step comprises the steps of:

calculating signal levels of the audio data;

deciding smoothed gain coefficients based on signal levels; and

generating preprocessed audio data by multiplying the smoothed gain coefficients to the audio data in the decided interval.

6. (Currently amended) An apparatus for providing audio data encoded by a codec having variable encoding rate, comprising:

means for deciding an interval of audio data that is to be encoded in a low bit rate by said codec; and

means for adjusting the amplitude of audio data of the decided interval before the audio data is processed by the codec, such that the audio data in the interval may ~~not~~ be encoded in a bit rate higher than or equal to said low bit rate when processed by the codec.

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7. (New) A method for preprocessing audio data to be processed by a codec having variable coding rate, wherein the codec is capable of determining whether data fed to the codec is noise signal or not, comprising the steps of:

deciding whether a frame in the audio data would be determined as noise signal when the audio data is processed by the codec; and

if the signal is determined as noise signal, preprocessing the frame such that the preprocessed frame is not determined as noise when processed by the codec.

8. (New) A method for preprocessing audio data to be transmitted through a transmission channel and then to be processed by a codec having variable coding rate, comprising the steps of:

preprocessing audio data before the audio data is transmitted through the transmission channel, such that the audio data is processed in the codec in a higher bit rate from the bit rate without the preprocessing.

9. (New) An apparatus for preprocessing audio data to be processed by a codec having variable coding rate, the apparatus being apart from the predetermined codec, comprising means for adjusting the amplitude of the audio data such that the audio data is processed in the codec in higher bit rate from the bit rate without the amplitude adjustment.